

REMARKS

Examiner L. Umez-Eronini is thanked for the thorough examination and search of the subject Patent Application. Claims 11-20 have been canceled.

The Examiner is thanked for allowing Claims 1-5.

All Claims are believed to be in condition for Allowance, and that is so requested.

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 6, 8, and 10 as being unpatentable over Chow in view of Toshiaki is requested in accordance with the following remarks.

It is agreed that Chow does not teach the absence of an etch stop layer or etching a via pattern into an organic layer through the trench pattern. It is agreed that Toshiaki teaches forming a via pattern into an organic layer 3 through the hard mask's pattern 4. Toshiaki must then etch the via pattern into the underlying inorganic layer 2 and etch the trench pattern into the organic layer 3.

In paragraph 14, the Examiner cites Toshiaki's Abstract which states: "Then, the organic low dielectric constant film 3, and the silicon oxide film 2 in the opening 6 are sequentially and selectively etched, and a via hole 8 is formed." However, this does not complete formation of the dual damascene opening. The next line of the Abstract says: "Then, the wiring groove 9 is

formed by etching the organic low dielectric constant film 3 with the silicon oxide film 4 as a mask.” Thus, Toshiaki describes a via-first scheme in which the via is first formed in the layers 3 and 2 and then the trench or wiring groove 9 is formed in the layer 3. Applicants’ Claim 6 teaches a trench-first method and claims that the etching of the via pattern into the organic layer through the trench pattern serves "to complete said forming of said dual damascene openings" (lines 14-17).

Reconsideration of the rejection under 35 U.S.C. 103 of Claims 6, 8, and 10 as being unpatentable over Chow in view of Toshiaki is requested in accordance with the remarks above.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 7 as being unpatentable over Chow in view of Toshiaki and further in view of Joshi et al is requested in accordance with the following remarks.

It is agreed that Joshi et al teaches forming semiconductor devices wherein metal lines overlie the devices. However, as discussed above, the combination of references does not teach the completion of the dual damascene openings by etching the trench pattern into the inorganic layer and thereafter etching the via pattern into the organic layer through the trench pattern as claimed in Claim 6.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 7 as being unpatentable over Chow in view of Toshiaki further in view of Joshi et al is requested in accordance

with the remarks above.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 9 as being unpatentable over Chow in view of Toshiaki and further in view of Wang et al is requested in accordance with the following remarks.

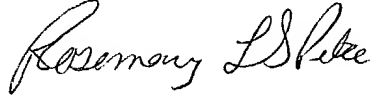
It is agreed that Wang et al teaches forming a dielectric layer that can comprise silicon dioxide or another material such as FSG. However, as discussed above, the combination of references does not teach the completion of the dual damascene openings by etching the trench pattern into the inorganic layer and thereafter etching the via pattern into the organic layer through the trench pattern as claimed in Claim 6.

Reconsideration of the rejection under 35 U.S.C. 103 of Claim 9 as being unpatentable over Chow in view of Toshiaki and further in view of Wang et al is requested in accordance with the remarks above.

Allowance of all Claims is requested.

It is requested that should Examiner Umez-Eronini not find that the Claims are now Allowable that she call the undersigned at 765 4530866 to overcome any problems preventing allowance.

Respectfully submitted,

A handwritten signature in cursive script, reading "Rosemary L. S. Pike". The signature is written in dark ink and is positioned below the typed name.

Rosemary L. S. Pike. Reg # 39,332